

PATENT

Atty. Dkt. No. GLBL 041

REMARKS

In the Office Action, the Examiner noted that claims 1-32 are pending in the application and that claims 1-17, 22-25, and 27 are rejected. Claims 18-21, 26, and 28-32 are allowed. By this response, claims 1-2, 7, 10, and 13 are amended. In view of the above amendments and the following discussion, Applicants submit that none of the claims now pending in the application are anticipated under the provisions of 35 U.S.C. §102. Thus, Applicants believe that all of these claims are now in condition for allowance.

I. REJECTION OF CLAIMS UNDER 35 U.S.C. §102

The Examiner rejected claims 1-17, 22-25, and 27 as being separately anticipated by each of Clark (United States patent 6,782,330, issued August 24, 2004), Ahlbrecht (United States patent 6,826,476, issued November 30, 2004), and King (United States patent 6,429,808, issued August 6, 2002). The rejections are respectfully traversed.

A. The Clark Patent

The Examiner stated that Clark teaches receiving a first set of satellite tracking data at a server, generating integrity data for a second set of satellite tracking data using the first set of satellite tracking data, and transmitting the integrity data to at least one remote receiver having the second set of satellite tracking data. (Office Action, p. 2). The Examiner concluded that Clark anticipates each of claims 1-17, 22-25, and 27. (Office Action, p. 2). Applicants respectfully disagree.

Clark teaches a waveform monitor on a GPS satellite that receives the GPS signal transmitted by the GPS satellite. (See Clark, Abstract). The waveform monitor compares the received GPS signal with a copy of what the GPS satellite intended to send. Clark discloses that the waveform monitor can compare the received digital navigation message with the copy stored in memory. The waveform monitor then sends an integrity message to GPS users that indicates the accuracy of the navigation message (i.e., is the satellite transmitting a correct message). (Clark, Abstract).

Clark does not teach each and every element of Applicants' invention recited in claim 1. Namely, Clark does not teach or suggest generating integrity data using a first set of satellite tracking data received at a server for a second set of satellite tracking data stored in at least one remote receiver. Specifically, Applicants' claim 1 positively recites:

"A method, comprising:
receiving a first set of satellite tracking data at a server;
generating integrity data for a second set of satellite tracking data stored in at least one remote receiver using said first set of satellite tracking data; and
transmitting said integrity data to said at least one remote receiver."
(Emphasis added).

First, Clark does not teach or suggest generating integrity data for a second set of satellite tracking data using a first set of satellite tracking data (i.e., a measure of the accuracy of the second set of satellite tracking data). Clark discloses comparison of data actually received from a GPS satellite with a copy of the same data, rather than a second set of data. That is, Clark operates on a comparison basis without regard to accuracy of the content of the navigation message.

Second, Clark does not teach or suggest generating integrity data for a second set of satellite tracking data stored in at least one remote receiver. Clark discloses that the data compared to the received GPS signal is stored in the GPS satellite itself, rather than in a remote receiver. Comparing data received from a GPS satellite with a copy of the same data stored in the GPS satellite, as taught by Clark, does not teach or suggest generating integrity data using a first set of satellite tracking data received at a server for a second set of satellite tracking data stored in at least one remote receiver, as recited in Applicants' claim 1.

"Anticipation requires the presence in a single prior art reference disclosure of each and every element of the claimed invention, arranged as in the claim." Lindemann Maschinenfabrik GmbH v. American Hoist & Derrick Co., 221 USPQ 481, 485 (Fed. Cir. 1984) (emphasis added). Since Clark does not disclose generating integrity data using a first set of satellite tracking data received at a server for a second set of satellite tracking data stored in at least one remote receiver, Clark does not teach each and every element of Applicants' invention recited in claim 1. Therefore, Applicants contend

that Clark does not anticipate claim 1 and, as such, claim 1 fully satisfies the requirements of 35 U.S.C. §102.

Independent claims 22 and 27 each recite features similar to the features of claim 1 emphasized above. In particular, claim 22 recites a processor configured to generate integrity data for a second set of satellite tracking data in at least one remote receiver using a first set of satellite tracking data. Claim 27 recites a server configured to generate integrity data for a first set of satellite tracking data stored in a memory in a remote receiver using second satellite tracking data. For the same reasons discussed above, Applicants contend that Clark does not anticipate claims 22 and 27 and that claims 22 and 27 fully satisfy the requirements of 35 U.S.C. §102. Finally, claims 2-17 and 23-25 depend, either directly or indirectly, from claims 1 and 22 and recite additional features therefor. Since Clark does not anticipate Applicants' invention as recited in claims 1 and 22, dependent claims 2-17 and 23-25 are also not anticipated and are allowable.

B. The Ahlbrecht Patent

The Examiner stated that Ahlbrecht teaches receiving a first set of satellite tracking data at a server, generating integrity data for a second set of satellite tracking data using the first set of satellite tracking data, and transmitting the integrity data to at least one remote receiver having the second set of satellite tracking data. (Office Action, p. 2). The Examiner concluded that Ahlbrecht anticipates each of claims 1-17, 22-25, and 27. (Office Action, p. 2). Applicants respectfully disagree.

Ahlbrecht teaches integration of Ground Based Augmentation Systems (GBAS) with a Satellite Based Augmentation System (SBAS). (See Ahlbrecht, Abstract). In particular, Ahlbrecht teaches converting received navigation satellite data to augmentation data in both the GBAS and SBAS systems. Each of the GBAS and SBAS systems processes the augmentation data to produce differential correction and integrity data. The GBAS system transmits its differential correction and integrity data to an SBAS master station. The SBAS master station combines the SBAS differential correction and integrity data with the GBAS differential correction and integrity data and transmits the combined data to an SBAS satellite. The SBAS satellite transmits the

differential correction and integrity data to users. (Ahlbrecht, col. 3, line 60 through col. 4, line 15).

Ahlbrecht does not teach each and every element of Applicants' invention recited in claim 1. Namely, Ahlbrecht does not teach or suggest generating integrity data using a first set of satellite tracking data received at a server for a second set of satellite tracking data stored in at least one remote receiver. Ahlbrecht teaches generating integrity data for the satellites themselves (i.e., data stating whether a satellite is operating correctly), rather than integrity data for a set of satellite tracking data stored in at least one remote receiver. Generating integrity data for satellites, as taught by Ahlbrecht, does not teach or suggest using a first set of satellite tracking data to generate integrity data for a second set of satellite tracking data stored in at least one remote receiver, as recited in Applicants' claim 1. Since Ahlbrecht does not disclose each and every element of Applicants' claim 1, Ahlbrecht does not anticipate Applicants' invention recited in claim 1. Lindemann Maschinenfabrik GmbH, 221 USPQ at 485. Therefore, Applicants contend that claim 1 fully satisfies the requirements of 35 U.S.C. §102.

Independent claims 22 and 27 each recite features similar to the features of claim 1 emphasized above. In particular, claim 22 recites a processor configured to generate integrity data for a second set of satellite tracking data in at least one remote receiver using a first set of satellite tracking data. Claim 27 recites a server configured to generate integrity data for a first set of satellite tracking data stored in a memory in a remote receiver using second satellite tracking data. For the same reasons discussed above, Applicants contend that Ahlbrecht does not anticipate claims 22 and 27 and that claims 22 and 27 fully satisfy the requirements of 35 U.S.C. §102. Finally, claims 2-17 and 23-25 depend, either directly or indirectly, from claims 1 and 22 and recite additional features therefor. Since Ahlbrecht does not anticipate Applicants' invention as recited in claims 1 and 22, dependent claims 2-17 and 23-25 are also not anticipated and are allowable.

C. The King Patent

The Examiner stated that King teaches receiving a first set of satellite tracking data at a server, generating integrity data for a second set of satellite tracking data using the first set of satellite tracking data, and transmitting the integrity data to at least one remote receiver having the second set of satellite tracking data. (Office Action, p. 3). The Examiner concluded that King anticipates each of claims 1-17, 22-25, and 27. (Office Action, p. 2). Applicants respectfully disagree.

King teaches an integrity monitor for isolating mobile stations from the effects of failing GPS satellites. (See King, Abstract). In particular, King teaches excluding assistance data pertaining to a detected unhealthy satellite from delivery to mobile stations. (King, col. 5, lines 25-41).

King does not teach each and every element of Applicants' invention recited in claim 1. Namely, King does not teach or suggest generating integrity data using a first set of satellite tracking data received at a server for a second set of satellite tracking data stored in at least one remote receiver. King discloses the use of satellite data to identify and inform receivers of failed satellites, rather than to generate integrity data for a set of satellite tracking data store in a remote receiver (i.e., a measure of the accuracy of the satellite tracking data). Using satellite data to identify failed satellites, as taught by King, does not teach or suggest using a first set of satellite tracking data to generate integrity data for a second set of satellite tracking data stored in at least one remote receiver, as recited in Applicants' claim 1. Since King does not disclose each and every element of Applicants' claim 1, King does not anticipate Applicants' invention recited in claim 1. Lindemann Maschinenfabrik GmbH, 221 USPQ at 485. Therefore, Applicants contend that claim 1 fully satisfies the requirements of 35 U.S.C. §102.

Independent claims 22 and 27 each recite features similar to the features of claim 1 emphasized above. In particular, claim 22 recites a processor configured to generate integrity data for a second set of satellite tracking data in at least one remote receiver using a first set of satellite tracking data. Claim 27 recites a server configured to generate integrity data for a first set of satellite tracking data stored in a memory in a remote receiver using second satellite tracking data. For the same reasons discussed above, Applicants contend that King does not anticipate claims 22 and 27 and that

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claims 22 and 27 fully satisfy the requirements of 35 U.S.C. §102. Finally, claims 2-17 and 23-25 depend, either directly or indirectly, from claims 1 and 22 and recite additional features therefor. Since King does not anticipate Applicants' invention as recited in claims 1 and 22, dependent claims 2-17 and 23-25 are also not anticipated and are allowable.

II. ALLOWED CLAIMS

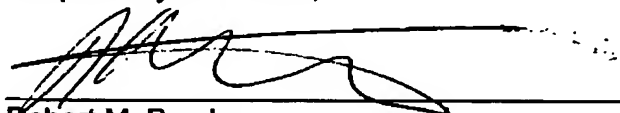
Applicants thank the Examiner for indicating that claims 18-21, 26, and 28-32 are allowed.

CONCLUSION

Thus, Applicants submit that none of the claims presently in the application are anticipated under the provisions of 35 U.S.C. § 102. Consequently, Applicants believe that all these claims are presently in condition for allowance. Accordingly, both reconsideration of this application and its swift passage to issue are earnestly solicited.

If, however, the Examiner believes that there are any unresolved issues requiring any adverse final action in any of the claims now pending in the application, it is requested that the Examiner telephone Mr. Robert M. Brush, Esq. or Mr. Raymond R. Moser Jr., Esq. at (732) 530-9404 so that appropriate arrangements can be made for resolving such issues as expeditiously as possible.

Respectfully submitted,



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